Building Meaningful Lives

2017 Milken Institute Hamptons Dialogues

- Education
- Obesity
- Housing
- Technology
- Demographics
- Aging
- Entitlements
- Leveling the Playing Field
What is a meaningful life?
“High tech/high touch. The principal symbolizes the need for balance between our physical and spiritual reality.”

- John Naisbitt
U.S. Surgeon General Vivek Murthy: What is the biggest disease in America today?

Answer: “It’s not cancer. It’s not heart disease. It’s isolation. It is the pronounced isolation that so many people are experiencing that is the great pathology of our lives today.”
Why Do People Play Video Games?
"Once you get past air, food, water, shelter, you get to social connections, sense of belonging. You get to self-esteem, overcoming challenges and building self-worth. And you get to self-actualization.

“We are providing self-actualization for a great many of our players.”

– Andrew Wilson, CEO, Electronic Arts

Source: Gamesindustry.biz
What is a Meaningful Life?

“Deprived of meaningful work, men and women lose their reason for existence; they go stark, raving mad.”

– Fyodor Dostoevsky
Opioids by the Numbers

- **Daily - More than 650,000 opioid prescriptions dispensed**
  - 237 Million per year

- **Daily - 3,900 people initiate nonmedical use of prescription opioids**
  - 1.4 Million per year

- **Daily - 580 people initiate heroin use**
  - 211,700 per year

- **Daily - 78 people die from an opioid-related overdose**
  - 28,470 per year

Source: IMS, SAMHSA, CDC (2015).
Opioid Addiction

The cost of opioid addiction to the U.S. economy – through lost worker productivity, absenteeism and poor job performance or related to crime and health care – was $78.5 billion in 2013.

- National Institute on Drug Abuse
“The purpose of life, after all, is to live it, to taste experience to the utmost, to reach out eagerly and without fear for newer and richer experience.”

– Eleanor Roosevelt
Maslow’s Hierarchy of Needs

- Physiological
- Safety
- Love/belonging
- Esteem
- Self-actualization
What is most important at your job?

- **60%**: My co-workers
- **59%**: Interest in work

*Source: Conference Board Job Satisfaction Survey 2016 (Wall Street Journal, July 19, 2016)*
"Yes, the planet got destroyed, but for a beautiful moment in time we created a lot of value for shareholders."

Source: Tom Toro
Median Income in the United States

- **1999**: $40,696
- **2016**: $56,516

Inflation-Adjusted

- **1999**: $57,900
- **2016**: $56,516

Source: U.S. Federal Reserve (2016 price level)
## Wealth Patterns in Selected Countries

### 2016 wealth per adult in 1,000 U.S. dollars (rounded)

<table>
<thead>
<tr>
<th>Country</th>
<th>Average</th>
<th>Median</th>
<th>&lt;$10K</th>
<th>&gt;$1M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>$375</td>
<td>$163</td>
<td>11.1%</td>
<td>6.2%</td>
</tr>
<tr>
<td>France</td>
<td>$244</td>
<td>$100</td>
<td>26.1%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Greece</td>
<td>$81</td>
<td>$53</td>
<td>22.9%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Italy</td>
<td>$104</td>
<td>$104</td>
<td>22.7%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Japan</td>
<td>$231</td>
<td>$96</td>
<td>9.3%</td>
<td>2.7%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>$289</td>
<td>$108</td>
<td>21.6%</td>
<td>4.5%</td>
</tr>
<tr>
<td>United States</td>
<td>$345</td>
<td>$45</td>
<td>34.6%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

Source: Global Wealth Databook 2016, Credit Suisse
Vulnerability of Today’s Families

- 44% of U.S. households could not cover a hypothetical emergency expense costing $400 without borrowing or selling something.

- 23% of U.S. adults cannot pay their monthly bills in full.

- 25% skipped a medical treatment last year because they couldn’t afford it.

- 28% have no retirement savings or plan.

U.S. Median Income

Source: U.S. Census data for 2015; Milken Institute.
Social Determinants of Health

The health and economic burden of social determinants must be reduced.

- Poverty
- Transportation
- Clean water
- Educational Opportunity
- Access to health care
- Unemployment
- Housing
- Sanitation
- Stigma and discrimination
- Hunger and food instability

Source: TBD
\[ P = \sum F_t \times (\sum HC_i + \sum SC_i + \sum RA_i) \]

<table>
<thead>
<tr>
<th>Financial Technology</th>
<th>Human Capital</th>
<th>Social Capital</th>
<th>Real Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative processes &amp; components including:</td>
<td>Productivity:</td>
<td>Rule of law</td>
<td>Cash</td>
</tr>
<tr>
<td>➢ Convertible bonds</td>
<td>➢ Skills</td>
<td>Property rights</td>
<td>➢ Receivables</td>
</tr>
<tr>
<td>➢ Preferred stock</td>
<td>➢ Education</td>
<td>Public health</td>
<td>➢ Real estate</td>
</tr>
<tr>
<td>➢ High-yield bonds</td>
<td>➢ Training</td>
<td>Universal education</td>
<td>➢ Factories</td>
</tr>
<tr>
<td>➢ Collateralized loans</td>
<td>➢ Experience</td>
<td>Religious freedom</td>
<td>➢ Capital equipment</td>
</tr>
<tr>
<td>➢ Collateralized bonds</td>
<td>➢ Creativity</td>
<td>Police/fire protection</td>
<td>➢ Roads</td>
</tr>
<tr>
<td>➢ Equity-linked securities</td>
<td>➢ Habits</td>
<td>Cultural resources</td>
<td>➢ Buildings</td>
</tr>
<tr>
<td>➢ Securitized obligations (mortgages, credit cards, etc.)</td>
<td>➢ Values</td>
<td>Universal suffrage</td>
<td>➢ Infrastructure</td>
</tr>
<tr>
<td>➢ Derivatives</td>
<td></td>
<td>Protection of creditors</td>
<td></td>
</tr>
</tbody>
</table>
America Goes to Work

U.S. and Fortune 500 Employment

- U.S. = + 62 million jobs
- Fortune 500 = minus 4 million

Modern capital markets begin

New financial technologies are fully implemented
In 1955, the Big 3 automakers in the U.S. produced 94% of all automobiles.

From Algeria to Vietnam, more than 50 nations now produce cars, and the U.S. produces fewer than 15%.

Sources: OICA; Wikipedia
Federal Spending Priorities

Annual, in $ billions

| $300 | Housing Subsidies (forgone tax revenue) |
| $200 | |
| $100 | FDA | CDC | NIH | Education |
| $0   |   |   |   |   |

Sources: FDA, CDC, NIH, DOE, and Office of Management and Budget.
Note: Education reflects total DOE budget. Housing subsidies reflect estimated forgone tax revenues from deductions for imputed rent, mortgage interest and property taxes.
Home prices don’t go up forever

Change in home prices in 125 years

Sources: IHS Global Insight, Corelogic, Milken Institute, 1/20/2016.
Social Effects of Overly Large Houses

- Degradation of environment
- Divorce
- Spousal abuse
- Drug abuse
- Alcoholism
- Hypertension
- Depression
## Consumer Spending

<table>
<thead>
<tr>
<th>U.S.</th>
<th>Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>33% Housing</td>
<td>23% Food</td>
</tr>
<tr>
<td>18% Transportation</td>
<td>15% Supplemental Education</td>
</tr>
<tr>
<td>13% Food</td>
<td>10% Housing</td>
</tr>
<tr>
<td>11% Insurance/pensions</td>
<td>8% Clothing</td>
</tr>
<tr>
<td>6% Healthcare</td>
<td>8% Other</td>
</tr>
<tr>
<td>5% Entertainment</td>
<td>6% Transportation</td>
</tr>
<tr>
<td>4% Apparel and services</td>
<td>5% Healthcare</td>
</tr>
<tr>
<td>2% Supplemental Education</td>
<td>5% Communication</td>
</tr>
</tbody>
</table>

Entitlement and Non-Defense Discretionary Spending

Source: Congressional Budget Office, 2016.
When a City Declares Bankruptcy ...

- **San Bernardino:** Bondholders receive a “60 percent haircut”; settles $40 million claim with city firefighters for $2.7 million – less than 10%.

- **Stockton:** Bankruptcy settled with no pension cuts. Franklin Templeton, which had loaned Stockton about $35 million, ended up with less than $7 million in the reorganization.

Source: Reuters, 2/3/16
Longer Life Expectancy; Longer Retirements

France

Life Expectancy at age 65

Retirement Age

Women

Men


14.4 18.3 22.0 26.5 26.2 30.8 28.6 32.9

Source: OECD Ageing and Employment Policies, France 2005
Human capital is the largest asset class.
Three Ways to Build Human Capital

- Education
- Immigration
- Health
Skilled and Unskilled Jobs in the U.S.

1950

- Unskilled: 60%
- Semi-skilled: 20%
- Skilled: 20%

Today

- Unskilled: 12%
- Semi-skilled: 18%
- Skilled: 70%

The Jobs Problem

(It Isn’t Jobs - It’s Trained Workers)

123,000,000 high-skilled U.S. jobs will be available in 2020

50,000,000 Americans will qualify for those jobs

Source: Edward Gordon, “Winning the Global Talent Showdown”
29% of Americans rated U.S. K-12 STEM education as “above average” or “best in the world.” Yet ...

- 16% of scientists ranked U.S. STEM programs above average
- U.S. 15-year-olds rank 27th in science and 35th in math
- U.S. students rank 27th in math and 20th in science among OECD nations

Sources: Pew Research Center report, Public and Scientist’s Views on Science and Society, 1/29/15; American Association for the Advancement of Science; Program for International Student Assessment (PISA) rankings
# How 15-Year-Olds Score in School

## Math

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>564</td>
</tr>
<tr>
<td>Japan</td>
<td>532</td>
</tr>
<tr>
<td>Canada</td>
<td>527</td>
</tr>
<tr>
<td>Korea</td>
<td>517</td>
</tr>
<tr>
<td>Russia</td>
<td>494</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>492</td>
</tr>
<tr>
<td>OECD Average</td>
<td>490</td>
</tr>
<tr>
<td><strong>United States</strong></td>
<td><strong>470</strong></td>
</tr>
<tr>
<td>Israel</td>
<td>470</td>
</tr>
<tr>
<td>UAE</td>
<td>427</td>
</tr>
<tr>
<td>Qatar</td>
<td>402</td>
</tr>
<tr>
<td>Jordan</td>
<td>380</td>
</tr>
<tr>
<td>Tunisia</td>
<td>367</td>
</tr>
</tbody>
</table>

## Science

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>493</td>
</tr>
<tr>
<td>Japan</td>
<td>538</td>
</tr>
<tr>
<td>Canada</td>
<td>528</td>
</tr>
<tr>
<td>Korea</td>
<td>516</td>
</tr>
<tr>
<td>Russia</td>
<td>487</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>509</td>
</tr>
<tr>
<td><strong>United States</strong></td>
<td><strong>496</strong></td>
</tr>
<tr>
<td>OECD Average</td>
<td>493</td>
</tr>
<tr>
<td>Russia</td>
<td>487</td>
</tr>
<tr>
<td>UAE</td>
<td>437</td>
</tr>
<tr>
<td>Israel</td>
<td>467</td>
</tr>
<tr>
<td>Qatar</td>
<td>418</td>
</tr>
<tr>
<td>Jordan</td>
<td>409</td>
</tr>
<tr>
<td>Tunisia</td>
<td>386</td>
</tr>
</tbody>
</table>

Source: OECD Programme for International Student Assessment 2015
Lower-Wage Jobs More Likely to Be Automated

Median Probability of Automation by Median Hourly Wage

- < $20/hour: 83%
- $20 - $40/hour: 31%
- > $40/hour: 4%

Source: U.S. Bureau of Labor Statistics; Frey and Osborne (2013); CEA calculations
### Top Universities Founded in Last 50 Years

1. Nanyang Technological University  
   Singapore

2. Hong Kong University of Science & Tech.  
   Hong Kong

   S. Korea

4. Pohang University of Science & Tech.  
   S. Korea

5. City University of Hong Kong  
   Hong Kong

6. Maastricht University  
   Netherlands

7. **University of California, Irvine**  
   U.S.

8. Hong Kong Polytechnic University  
   Hong Kong

9. University of Calgary  
   Canada

10. Universitat Autònoma de Barcelona  
    Spain

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The only other U.S. universities in the Top 50 are UC Santa Cruz and the University of Texas at Dallas.

Source: QS Quacquarelli Symonds Ltd. (Universities Less than 50 years old)
MENA Literacy Rates

<table>
<thead>
<tr>
<th>Country</th>
<th>Literacy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morocco</td>
<td>71.7%</td>
</tr>
<tr>
<td>Egypt</td>
<td>75.8%</td>
</tr>
<tr>
<td>Algeria</td>
<td>79.6%</td>
</tr>
<tr>
<td>Tunisia</td>
<td>81.1%</td>
</tr>
<tr>
<td>Syria</td>
<td>86.3%</td>
</tr>
<tr>
<td>Lebanon</td>
<td>94.1%</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>94.8%</td>
</tr>
<tr>
<td>Israel</td>
<td>97.8%</td>
</tr>
<tr>
<td>Jordan</td>
<td>98.0%</td>
</tr>
</tbody>
</table>

Note: Israel's rate for 2011, all other rates are 2015.
# Fighters Joining ISIS by Nation

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tunisia</td>
<td>6,000</td>
</tr>
<tr>
<td>2.</td>
<td>Saudi Arabia</td>
<td>2,500</td>
</tr>
<tr>
<td>3.</td>
<td>Russia</td>
<td>2,400</td>
</tr>
<tr>
<td>4.</td>
<td>Turkey</td>
<td>2,100</td>
</tr>
<tr>
<td>5.</td>
<td>Jordan</td>
<td>2,000</td>
</tr>
<tr>
<td>6.</td>
<td>France</td>
<td>1,700</td>
</tr>
<tr>
<td>7.</td>
<td>Morocco</td>
<td>1,200</td>
</tr>
<tr>
<td>8.</td>
<td>Lebanon</td>
<td>900</td>
</tr>
<tr>
<td>9.</td>
<td>Germany</td>
<td>760</td>
</tr>
<tr>
<td>10.</td>
<td>United Kingdom</td>
<td>760</td>
</tr>
</tbody>
</table>

Sources: National Bureau of Economic Research (Northwestern University and Hebrew University); CityLab 8-10-16
- Academic Scholarships
- Support for Internships
- Annual Summit
- Network of Students and Professionals
- Academic/Career Exploration Fund
- Ongoing Career Counseling and Support
431 Scholars since 1989
108 born outside the U.S.
41 countries of origin
333 Scholars have parents born outside U.S.
114 colleges attended
63 are married
92 children of Milken Scholars
Immigrants Seek Strong Social Capital

Throughout history, people have sought to live in nations that provide the freedoms that come with vibrant social capital – especially the Rule of Law.

In the 19th century, 50 million Europeans emigrated to America.
Where U.S. Immigrants Were Born

1960
- Europe: 75%
- Asia: 5%
- Latin America: 9%
- Canada: 10%
- Other: 1%

Today
- Latin America: 54%
- Europe: 12%
- Asia: 28%
- Other: 5%

Sources: Migration Policy Institute, U.S. Census, United Nations Population Division, 2015
Note: 2015 figures sum to 101% due to rounding.
# States with Majority “Minority” Toddler Populations

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>European Ancestry</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Hawaii</td>
<td>15.2%</td>
</tr>
<tr>
<td>2.</td>
<td>New Mexico</td>
<td>24.9%</td>
</tr>
<tr>
<td>3.</td>
<td>California</td>
<td>25.1%</td>
</tr>
<tr>
<td>4.</td>
<td>Washington, D.C.</td>
<td>27.1%</td>
</tr>
<tr>
<td>5.</td>
<td>Texas</td>
<td>31.1%</td>
</tr>
<tr>
<td>6.</td>
<td>Nevada</td>
<td>36.9%</td>
</tr>
<tr>
<td>7.</td>
<td>Arizona</td>
<td>39.1%</td>
</tr>
<tr>
<td>8.</td>
<td>Maryland</td>
<td>42.2%</td>
</tr>
<tr>
<td>9.</td>
<td>Florida</td>
<td>42.8%</td>
</tr>
<tr>
<td>10.</td>
<td>Georgia</td>
<td>43.1%</td>
</tr>
</tbody>
</table>

Sources: Brookings Institution (analysis of Census Bureau Population Estimates/2013); GSV
Examples of Social Capital

- Universal suffrage
- Rule of law
- Education and health care
- Police and fire protection
- Religious freedom
- Cultural resources
- Property rights
- Protection of creditors
- Financial reporting standards
Percentage of high-net-worth individuals from selected countries who say they plan to move abroad in the next five years:

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>47%</td>
</tr>
<tr>
<td>Singapore</td>
<td>23%</td>
</tr>
<tr>
<td>U.K.</td>
<td>20%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>16%</td>
</tr>
<tr>
<td>U.S.</td>
<td>6%</td>
</tr>
<tr>
<td>India</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: Barclays, The Wall Street Journal
Obesity Rates Worldwide

Source: World Health Organization 2014
The direct costs attributable to health conditions caused by obesity and being overweight, including the value of shortened life spans, total $1.4 TRILLION.

Source: Fat America: The Health & Economic Impact of Obesity/Milken Institute 2016
What happens when you cut down sugar in a kid’s diet for nine days?

Source: Obesity journal (February 2016) Robert Lustig
Technology: Innovation and Disruption

1. Agriculture / Food Production
2. Communications / Media
3. Education / Research / Big Data
4. Energy / Power from the Sun
5. Environment / Air / Water
6. Health Care / Medical Research
7. Retail / Distribution
8. The Sharing Economy / Uber / Airbnb
9. Transportation
The Old Infrastructure
The New Infrastructure
# The World’s Largest Companies by Market Cap

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Market Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Apple</td>
<td>$813 Billion</td>
</tr>
<tr>
<td>2.</td>
<td>Alphabet</td>
<td>$636 Billion</td>
</tr>
<tr>
<td>3.</td>
<td>Microsoft</td>
<td>$558 Billion</td>
</tr>
<tr>
<td>4.</td>
<td>Facebook</td>
<td>$486 Billion</td>
</tr>
<tr>
<td>5.</td>
<td>Amazon</td>
<td>$460 Billion</td>
</tr>
<tr>
<td>6.</td>
<td>Alibaba</td>
<td>$428 Billion</td>
</tr>
<tr>
<td>7.</td>
<td>Tencent</td>
<td>$397 billion</td>
</tr>
<tr>
<td>8.</td>
<td>Johnson &amp; Johnson</td>
<td>$356 Billion</td>
</tr>
<tr>
<td>9.</td>
<td>ExxonMobil</td>
<td>$325 Billion</td>
</tr>
<tr>
<td>10.</td>
<td>JPMorgan Chase</td>
<td>$319 Billion</td>
</tr>
</tbody>
</table>

*Source: Yahoo Finance 8-20-19*
# Enterprise Value Per Employee

<table>
<thead>
<tr>
<th>Company</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macy's</td>
<td>$83,000</td>
</tr>
<tr>
<td>Walmart</td>
<td>$118,000</td>
</tr>
<tr>
<td>Sony</td>
<td>$384,000</td>
</tr>
<tr>
<td>IBM</td>
<td>$464,000</td>
</tr>
<tr>
<td>Amazon</td>
<td>$1.4 million</td>
</tr>
<tr>
<td>Microsoft</td>
<td>$4.6 million</td>
</tr>
<tr>
<td>Apple</td>
<td>$7.0 million</td>
</tr>
<tr>
<td>Alibaba</td>
<td>$7.8 million</td>
</tr>
<tr>
<td>Google</td>
<td>$8.1 million</td>
</tr>
<tr>
<td>Facebook</td>
<td>$25.8 million</td>
</tr>
</tbody>
</table>

Source: Thomson Reuters (7/19/2017).
Notes: Measure based on latest EV and latest full-time employment numbers.
Walmart Challenges Amazon on Drone Delivery

Walmart has applied for a patent on a floating, blimp-style warehouse that will:

- Fly at heights between 500 and 1,000 feet
- Contain multiple launch bays
- Operate autonomously or by remote human pilot

NOTE: Amazon was granted a similar patent in April 2016.

Source: Fortune 8/20/17
21st Century Population Growth Will Be in Africa

Source: United Nations. Note: Latin America includes the Caribbean, dashed values are projected.
“The problem [in Africa] is not getting capital. It’s developing entrepreneurs.”

- Strive Masiyiwa
  Founder and Chairman
  Econet Wireless
Equips young professionals from developing economies with tools/experience to develop capital markets in their countries.

Inaugural 2016 class comprises 18 members from sub-Saharan Africa and India.

Active alumni network will foster next generation of leaders.
Today is the best day of their lives
- Asia Center
- California Center
- FasterCures
- Center for Financial Markets
- Center for the Future of Aging
- Center for Jobs and Human Capital
- Center for Public Health
- Center for Strategic Philanthropy
Aging and Longevity
Education/Human Capital
Energy/Environment
Finance/Access to Capital/MI Center for Financial Markets
Government/Leadership
Public Health and Medical Research
Industries
Job Creation
Media, Entertainment, and Technology
Philanthropy/Impact Investing
Cities, States and Regions of the World
Philanthropy Advisory Service: a customized approach to developing a portfolio that will advance progress against deadly and debilitating diseases.

The Family Program: off-the-record discussions among individuals and families on critical issues that define goal-setting and shape giving strategies.

The Chairman’s Circle: an affinity network of key philanthropists designed to spur real-time sharing of experiences and insights.
# Upcoming Events

## 2017

- **September 13-15**  
  Milken Institute Asia Summit
- **October 5-7**  
  PCF Scientific Retreat
- **October 23-24**  
  Future of Public Health Summit
- **November 6**  
  PCF New York Dinner
- **November 8**  
  Milken Institute California Summit
- **November 14**  
  FasterCures’ Partnering for Cures
- **November 17-19**  
  PCF Pro-Am Tennis Tournament
- **December 4-5**  
  Milken Institute London Summit

## 2018

- **February 7-8**  
  Milken Institute MENA Summit
- **March 16-18**  
  PCF Pro-Am Tennis Tournament
- **April 28 – May 2**  
  Milken Institute Global Conference